

Aluminum Nitrate 9-Hydrate

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Aluminum Nitrate 9-Hydrate

Synonyms/Generic Names: None

SDS Number: 28.00

Product Use: For Educational Use Only

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information Contact: Ward's Science
5100 West Henrietta Rd.
PO Box 92912-9012
Rochester, NY 14692
(800) 962-2660 (Monday-Friday 7:30-7:00 Eastern Time)

In Case of Emergency Call: CHEMTREC – 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: Oxidizer, Irritant, Carcinogen

Target Organs: None Known

Signal Words: Warning

Pictograms



GHS Classification:

Oxidizing solids	Category 3
Acute toxicity, Oral	Category 5
Skin irritation	Category 2
Eye irritation	Category 2A

GHS Label Elements, including precautionary statements:

Hazard Statements:

H272	May intensify fire; oxidizer.
H303	May be harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation..

Precautionary Statements:

P220	Keep/Store away from clothing/combustible materials.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.

Potential Health Effects

Eyes	May cause eye irritation.
Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Ingestion	May be harmful if ingested.

NFPA Ratings

Health	2
Flammability	0
Reactivity	1
Specific hazard	Not Available

HMIS Ratings

Health	2
Fire	0
Reactivity	1
Personal	C

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Aluminum Nitrate Nonahydrate	100	7784-27-2	236-751-8	AlN ₃ O ₉ ·9H ₂ O	375.13 g/mol

4. FIRST-AID MEASURES

Eyes	In case of eye contact, rinse with plenty of water and seek medical attention immediately.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
Skin	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention.
Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

5. FIREFIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	When heated to decomposition, will emit toxic fumes. (Nitrogen oxides, Aluminum oxides). May intensify fire.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Evacuate unprotected personnel from area. Eliminate all ignition sources. See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to a federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Cleanup personnel need personal protection from inhalation and skin/eye contact. Pick up and arrange disposal without creating dust. Sweep up and place in suitable containers for disposal. Clean surfaces thoroughly with water to remove residual contamination. Any release to the environment may be subject to federal/national or local reporting requirements. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use.

Conditions for safe storage, including any incompatibilities

Store in cool, dry, well ventilated area. Protect against physical damage. Minimize dust generation and accumulation. Do not breathe dust. Do not get on eyes, skin or clothing. Do not ingest or inhale. Isolate from strong bases and separate from organic materials. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls:

Component	Exposure Limits	Basis	Entity
Aluminum (7429-90-5), Metals and compounds	1 mg/m ³	TLV	ACGIH
	15* mg/m ³ 5** mg/m ³	PEL	OSHA
	10* mg/m ³ 5** mg/m ³	REL	NIOSH

*Total dust

**Respirable fraction

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

Personal Protection

Eyes	Wear chemical safety goggles.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear protective gloves and clean body-covering clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Other	Not Available

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling. Have supplies and equipment for neutralization and running water available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	White crystals. Solid.
Odor	No odor.
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	73°C (163°F) Decomposes
Initial boiling point and boiling range	Not Available
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Flammable
Vapor pressure (mmHg)	Not Available
Vapor density	Not Available
Relative density	Not Available
Solubility (ies)	Soluble in water and alcohol
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Applicable
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under ordinary conditions of use and storage.
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Moisture.
Incompatible Materials	Water, moist air, strong reducing agents, powdered metals, and strong acids.
Hazardous Decomposition Products	Nitrogen and aluminum oxides.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Skin	Not Available
Eyes	Not Available
Respiratory	Not Available
Ingestion	LD50 Oral- rat- 3,671 mg/kg

Carcinogenicity

IARC	2A- Group 2A: Probably carcinogenic to humans (Aluminum nitrate)
ACGIH	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Redness, itching and pain.
Eyes	Itching, pain, and watering eyes.
Respiratory	Coughing, shortness of breath, burning, choking, wheezing, laryngitis, headache of nausea.
Ingestion	Nausea, vomiting and abdominal spasms.

Chronic Toxicity	Not Available
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	Not Available
Reproductive Toxicity	Not Available
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Vertebrate	Not Available
Aquatic Invertebrate	Not Available
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Not Available

13. DISPOSAL CONSIDERATIONS

Waste Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste products or residues.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	UN1438, Aluminum Nitrate, 5.1, pg III
TDG	UN1438, ALUMINUM NITRATE, 5.1, pg III
IMDG	UN1438, ALUMINUM NITRATE, 5.1, pg III
Marine Pollutant	No.
IATA/ICAO	UN1438, Aluminum nitrate, 5.1, pg III

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	No
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Aluminum Nitrate
SARA 312	Aluminum Nitrate
SARA 313	Not Listed
WHMIS Canada	Class C: Oxidizing material. Class D-2B: Toxic Material Causing Other Toxic Effects

16. OTHER INFORMATION

Revision	Date
Revision 1	01/28/2013
Revision 2	06/19/2013

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